

NEW FORMS OF ZYGAENIDAE FROM SUMATRA, CERAM, AND NEW GUINEA.

BY J. J. JOICEY AND G. TALBOT.

THE SPECIMENS WERE COLLECTED BY MESSRS. C., F., AND J. PRATT.

1. *Aglaope hemileuca* Roths. *ceramensis* subsp. nov. and *ab. fumosa* nov.

It is interesting to note that the first of this genus to be discovered in Ceram should be a New Guinea species.

♂ ♀. Fore wing with the indistinct dark subbasal band placed more proximal than in the type form. Vein 7 is given off much nearer the angle of the cell in every specimen, whilst the position of this vein in a series from New Guinea is likewise stable.

Ab. fumosa. Both wings smoky-black, the subbasal line of fore wing distinct. Vein 6 of fore wing arises from angle of cell. One ♂, 3,000 feet, December.

Central Ceram: Manusela, 6,000 feet, October to November, 6 ♂♂, 1 ♀; 4,600 feet, January, 1 ♂; 3,000 feet, January to February, 1 ♀.

2. *Psaphis rothschildi* sp. nov.

Distinct from any known form. Perhaps allied to *euschemoides* Moore, but differing in the smaller discal spots, the differently placed lower white distal spots, and in the small discal spots of the hind wing.

♂ ♀. Upperside with black ground colour. Fore wing with pale yellow basal spots. Three small coral red discal spots, one in the cell below middle, one more distal below the cell, the other below it in 1b, and directed distad. A small white discoidal mark. A subapical series of five large white spots placed close together in 3, 4, 5, 6, and 9, the one in 5 larger than the others, the lower two more distal. Three small white subterminal spots in 2 to 1b, the first the smaller, the second directed distad, the lower nearer the margin. Ground-colour irrorated with deep purple-brown, especially over the basal fourth and along the veins. Veins striped with dark-green. Hind wing with

base and inner margin to the second submedian pale-yellow, merging into orange-red or flame-scarlet (ii), which also colours the other spots. A long stripe in 1c, not reaching margin; a short stripe below the cell; a similar stripe in lower half of cell, reaching beyond vein 2, and a longer stripe next it in upper part of cell.

All these stripes separated distally by the ground-colour, and merged together proximally in the yellow basal colouring. Three discal spots in 2-4, the middle one projecting below the others, the distal one the smaller. Two small submarginal spots in cellule 2. Costa edged with pale-yellow at base for a short length. Anal angle tinged with orange-red. Veins edged with deep violet.

Underside markings similar to upperside. Fore wing with basal stripes on costa and on first submedian. Discal markings flame-scarlet; an oblong spot in middle of cell, a long stripe below cell, not reaching vein 2, an elongate spot in middle of 1b. Other markings as above. Veins heavily bordered with cerulean-blue except at apex. Hind wing with markings as above but a long stripe in 1b, separated from the one in 1a and 1c, and nearer the inner stripe, interspaces shot with violet-blue. A small spot in 6 near the cell. Veins striped with violet-blue.

Head and antennæ black, frons and palpi pale-yellow, collar and patagia pale-yellow. Abdomen pale-yellow ringed with deep-violet. Legs fuscous, striped with deep-violet on the outside and with pale-yellow on the inside except tarsi, which are fuscous mixed with pale-yellow.

Length of fore wing: 26 mm.

S.W. Sumatra: Mount Korintji, 7,300 feet, August to September, three ♂♂, one ♀.

3. *Eusphalera janthina* sp. nov.

Distinct from any other form, and bearing a close resemblance to the Geometrid *Milionia dispar* Prout, found in the same locality.

♀. Upperside of fore wing orange-yellow to orange with a broad black apical area. The orange area reaches beyond cell; outer edge clearly defined, reaching the narrow black costal edge beyond the middle and the outer margin at end of lower submedian, lower part curved distad. An ill-defined black patch on inner margin before the tornus, reaching upper submedian. A series of five small apical dark metallic blue spots, arranged as in other species of the genus. Hind wing with fuscous-black ground-colour. Basal area to base of vein 3

metallic dark bluish-violet (x). Costal area yellow-orange to vein 6, thence merged into a narrow discal orange band reaching the anal angle. Apex and a narrow marginal edge black to vein 3.

Underside as above. Hind wing with the violet area reaching the costa and separated from the orange distal band by a narrower black interspace than on the upperside.

Head and antennæ black, vertex and thorax metallic blue. Abdomen black with a violet tinge, and marked with metallic blue at the joints. Pectus blue; legs fuscous striped with blue.

Length of fore wing: 20 mm.

Central Ceram: Manusela, 3,000 feet, January to February, 1920, two ♀ ♀.

4. *Eusphalera aurantidiscus* sp. nov.

♀. Upperside with black ground-colour. Fore wing with a transverse band, deep chrome (iii) tinged with orange-red anteriorly. This band is broad on the costa, outer edge slightly incurved to vein 4, outwards to 2 and inwards to distal margin; inner edge curved sharply distad below vein 2; the outer edge passes through the cell near the end and cuts veins 2 and 3, the inner edge passes through middle of cell and cuts vein 2 and the submedian. Five small subapical spots of greenish-blue, formed by loosely placed scales. Hind wing ochraceous-orange (xv), with black basal area to middle of cell and scattered black scaling on part of the orange area; outer edge of orange area curved outwards at the middle. A distal margin of ground-colour, broader anteriorly and narrowing to the middle of 1b, where it ends in a point.

Underside with black ground-colour. Fore wing with band as above, but paler. Subapical blue spots larger than above and slightly pointed proximally. Base of costa with some greenish-blue scales. Hind wing with ochraceous-orange discal area smaller than above, not reaching upper edge of cell, inner edge not well defined, touching base of 2 and extending to middle of inner margin; outer edge sharply defined, curved outwards and only slightly invading base of cellule 4, slightly angled below vein 2; this band curved slightly basad at its anterior end. A submarginal narrow greenish-blue stripe from the apex to vein 2, bent at vein 5, thicker above this vein.

Head black, vertex metallic-blue, collar scaled with metallic greenish-blue. Thorax and basal two segments of abdomen black. Antennæ with shaft black, branches chestnut. Legs black, scaled with metallic

greenish-blue. Abdomen pale yellow except the base; ventral surface fuscous-black, apices of segments edged with yellow.

Length of fore wing: 20 mm.

Dutch New Guinea: Nomnagihé, 2,000 feet, January to February, one ♀.

5. *Eusphalera milionioides* sp. nov.

Allied to *satisbonensis* Jord., from Goodenough Island, the ♀ ♀ of both presenting a strong likeness to some forms of the Geometrid genus *Milionia*.

♂. Upperside with the markings similar to the allied form. The fore wing with yellow bands less oblique, broader posteriorly and ending on the inner margin before the tornus. A yellow spot on costa at base. Hind wing with yellow area reaching costa, outer edge straight from vein 4 to costa. Black distal margin narrowing to anal angle. Some black dusting at base of wing.

Underside as above. Hind wing with yellow area somewhat rectilinear and not reaching costa.

Head, thorax, and abdomen black. Antennae with shaft black, branches chestnut. Legs brown scaled with yellowish. Abdomen pale yellow on ventral surface.

♀. Similar to the ♀ of *satisbonensis*. Upperside of fore wing with a broader orange-red band. Hind wing with a narrower yellow band, the edges of which are irregular.

Underside of fore wing with traces of bluish subapical spots. Hind wing as above. Submarginal blue line unbroken and edging costa to base.

Antennae, head, thorax, abdomen, and legs as in allied form.

Length of fore wing: ♂, 18 mm.; ♀, 23 mm.

Dutch New Guinea: Mount Kunupi, 6,000 feet, November to December, one ♂; Nomnagihé, 2,000 feet, January to February, one ♀.

6. *Eusphalera cadmium* sp. nov.

Distinguished by the cadmium-yellow basal half of fore wing and the similarly coloured hind wing patch.

♀. Upperside with black ground-colour. Fore wing with basal half light cadmium (iv), not reaching end of cell and invading the base of cellule 2, outer edge of this area dusted with black, inner edge oblique from base of costa to middle of inner margin. A faint orange tinge at

base. Hind wing with a large distal patch of light cadmium, its inner edge a little invaded by the ground-colour, from upper edge of cell near middle to inner margin a little above the anal angle; outer edge well rounded and reaching the margin at the first submedian.

Underside with black ground-colour, yellow areas paler. Fore wing with a narrow curved apical band of metallic greenish-blue, close to the margin. Basal yellow as above. Hind wing with yellow area as above. A marginal band of metallic greenish-blue from the costa a third from apex to vein 2, broader in cellules 5 and 6, then suddenly narrowing and ending in a point.

Head, antennæ, thorax, and abdomen black. Legs black, scaled with metallic blue.

Length of fore wing : 21 mm.

Dutch New Guinea: Mount Kunupi, 6,000 feet, November and December, one ♀.

7. *Eusphalera jordani* sp. nov.

A very distinct form, distinguished by the red band on the fore wing and presenting a great resemblance to the Geometrid *Milionia rubrifascia* J. and T., which was found in the same locality.

♂. Upperside with black ground-colour. Fore wing with a discal coral-red (xiii) band, from just below costal edge at the middle, crossing the cell beyond the middle, invading the base of cellule 2, and narrowing to a point above the lower submedian; outer edge nearly straight, inner edge curved distad at the middle, and again below vein 2. Hind wing with basal half metallic cerulean-blue (viii), lighter proximally. The edge of this blue area indented.

Underside with black ground-colour. Fore wing with red band paler and broader, only slightly narrower posteriorly and limited by the lower submedian. Metallic blue basal stripes; a short one in cell and two longer ones in 1b and 1c. A small greenish-blue apical spot near costa. Hind wing with blue basal half as above, filling half the cell, produced along the costa and along vein 2, filling base of cellule 2, and invaded by black at the first submedian, vein 2 cutting off a triangular marginal black spot. A narrow marginal greenish-blue stripe joining the costal stripe and continued to the stripe on vein 2 at its end, broader in cellules 5 and 6, then suddenly narrowing and ending in a point.

Antennæ, head and thorax black. Frons edged with metallic blue above, collar bordered with metallic blue, patagia tipped with metallic

blue. Abdomen dark metallic green. Legs black, scaled with metallic blue.

Length of fore wing : 17 mm.

Dutch New Guinea : Mount Kunupi, 6,000 feet, November to December, one ♂.

8. *Eterusia semiflava* sp. nov.

Allied to *risa* Doubl., but with basal half of both wings yellow in the ♀.

♀. Upperside with proximal half primuline yellow (xvi), distal half black. Yellow area of fore wing sharply defined, ending well before vein 2; in two specimens with some brown basal scaling, leaving a narrow band of yellow. Veins in distal half striped with Brussels brown (iii). Hind wing with yellow area angled outwards at vein 4.

Underside of fore wing with basal yellow half and blue-black distal half. A yellow discoidal spot. Hind wing with distal area greenish-yellow, bearing blue-black spots; one in end of cell and produced apically, its upper edge parallel to costa, a small spot near base of cellule 4, a larger one in 3, and a still larger one in 2, a streak behind vein 2, and a more distal spot in 1c.

Head and antennae black; basal segment of antennae, palpi, and vertex dark metallic blue-green; collar narrowly red, edged with black and dark metallic blue. Thorax dark metallic blue-green, patagia yellow. Abdomen deep blue ringed with yellow-white. Legs fuscous, femora dark metallic blue,

Length of fore wing : 20 mm.

S.W. Sumatra : Mount Korintji, 7,300 feet, August to September, 1921, five ♀♀.

9. *Eterusia picturata* sp. nov.

Distinguished by the brilliant metallic-blue proximal area of the hind wing.

♂. Upperside of fore wing Vandyke-brown (xxviii), crossed by a narrow pale-yellow band from costa before the middle to just before the lower submedian, bent distad at lower edge of cell, and narrowing posteriorly. Hind wing with proximal half metallic cerulean-blue (viii) to upper edge of cell and base of vein 2, slightly invaded by the black-brown colour on the submedian and separated by a black line from a discal broad band of mustard-yellow (xvi). The yellow discal band

extends from vein 8 to 2 with a small spot behind this vein, outer edge deeply indented in cellule 5 and slightly so on veins 2 and 3. Distal area and margin black to the anal angle.

Underside of fore wing with proximal half glossy Nile-blue (xix), bordered by a discal pale-yellow band edged with black on inside. The discal band forms a large spot in the cell and narrows below this to lower submedian. Distal area black with a subapical band of Nile-blue from costa to tornus, outer edge slightly curved, inner edge with a separated spot in upper angle of cell, a projection at vein 2 and at the tornus. Hind wing as on upperside, but the costa and outer edge of discal band narrowly bordered with glossy Nile-blue, projecting slightly on the veins and merging into the basal blue at the anal area. Discal band broader than above, its inner edge straight and but slightly bordered with black.

Antenna black, shaft scaled above with metallic bluish-green, basal segment of same colour. Head black, vertex with metallic bluish-green, frons metallic-green. Collar red, tegulae and patagia dark-green. Abdomen dark metallic-green above, black ringed with fuscous below. Legs bright metallic greenish-blue.

♀. Fore wing dark-green overlaying a ground colour of Vandyke-brown. A pale-yellow discal band as in the ♂, but broader and with a small spot below the lower submedian. Hind wing with paler blue in proximal area and broader yellow band. Discal band with inner edge nearly straight, outer edge curved and only indented in cellule 5.

Underside as in ♂ but with broader yellow bands and distal blue areas.

Length of fore wing: ♂ ♀, 24 mm.

Central Ceram: Manusela, 6,000 feet, October to December, one ♂, five ♀ ♀.

10. *Pidorus chalybeatus* sp. nov.

The first representative of this genus from New Guinea.

♂. Upperside of fore wing black crossed by a narrow and sharply defined white band from costa at base of vein 11 to inner margin before the tornus, passing through the end of cell and curved slightly outwards between cell and submedian. Hind wing steely-blue, the shade of dark Iyrian-blue (xxxiv).

Underside with fuscous-black ground-colour. Fore wing with a broader white band having a narrower central part as above, the additional more thinly scaled area mostly in the cell and on the distal

edge of the central band. Basal area to inner edge of band dark Iyrian-blue. Hind wing dark Iyrian-blue with a distal margin of ground-colour, broader at the apex and narrowing to the anal angle.

Head, thorax, and abdomen black. Antennæ black; collar red; palpi black; legs fuscous-black thinly scaled with metallic blue; abdomen with some metallic blue scaling on the ventral surface.

Venation of fore wing with 4 and 5 arising from the same point, 6 from a little beyond base of 8.

Length of fore wing: 19 mm.

Dutch New Guinea: Mount Kunupi, 6,000 feet, November to January, three ♂♂.

11. *Clematoessa virgata* sp. nov.

The second known species in this genus. Distinguished by the yellow apical patch and basal stripe on the fore wing.

This genus is described by Jordan in Nov. Zool. xxii, p. 297, 1915, from a single female. We are able to describe another species including the ♂. The ♂ antenna has very long branches.

♂. Upperside with ground-colour fuscous-black, markings light cadmium to apricot yellow (iv). Fore wing with a small apical spot rounded on the outside, indented on vein 9 on the inside. A large cell stripe not reaching end of cell, narrow at base and broadening to beyond upper edge of cell, then becoming narrower and rounded at the end. Hind wing with a large discal patch filling outer third of cell to within about 2 mm. of the margin at veins 4 and 5, outer edge nearer the cell above 5, not reaching 8, and limited by vein 2; inner edge incurved in the cell, angled before the base of 2.

Underside as above. Cell stripe of fore wing produced towards lower angle of cell.

Antenna with long branches, longer than in most genera, fuscous-black. Head, thorax, and abdomen fuscous-black. Frons projecting, well rounded. Collar yellow. Patagia fuscous-black mixed with metallic green. Legs fuscous, striped with metallic blue. Abdomen yellowish-white on ventral surface.

♀. Fore wing markings as in the ♂, but larger and deeper in tone. Hind wing with a broad band of orange (iii), covering the distal area between vein 5, and the lower submedian, paler at the anal angle; inner edge irregular, not reaching base of 2, outer edge sharply marked, curved slightly outwards from 5, almost reaching 7; anterior part of band curved proximally.

Underside as above. Hind wing with the yellow marginal spot in 7 produced on the margin to join the band at vein 5.

Head metallic green on the vertex. Abdomen on the ventral surface fuscous, slightly mixed with grey-white. Anal tuft buff. Otherwise as in the ♂.

Length of fore wing: ♂, 21 mm., ♀, 30 mm.

Dutch New Guinea: Nomnagihé, 2,000 feet, January, February, one ♂, two ♀ ♀.

12. *Clematoessa xuthomelas* Jord. *impuncta* subsp. nov.

♀. Differs from *xuthomelas* in the absence of the cellspot in the band of the fore wing. Hind wing with only a slight yellow dusting on the margin between vein 2 and second submedian.

Nomnagihé, 2,000 feet, January to February, one ♀.